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LOW-MU TWIN POWER TRIODE

GENERAL DATA

Heater, for Unipotential Cathodes:

Voltage 6.3 $\pm$ 10% ac or dc volts

Current 2.5 amp

Direct Interelectrode Capacitances (Approx.):

(Each Unit, without external shield)

Grid to Plate 8 μf Input 6 μf Output 2.2 μf

Heater to Cathode:

Triode Unit No.1 6.5 μf Triode Unit No.2 6 μf Grid of Unit No.1 to Grid of Unit No.2 0.5 μf

Plate of Unit No.1

to Plate of Unit No.2 2 μf Characteristics, Amplifier Class A₁ (Each Unit):

Plate-Supply Voltage 135 volts

Cathode-Bias Resistor 250 ohms

Amplification Factor 2

Plate Resistance 280 ohms

Transconductance 7000 μmhos

Plate Current 125 ma

Mechanical:

Mounting Position Any

Maximum Overall Length 4-1/16" ←

Maximum Seated Length 3-1/2" ←

Maximum Diameter 1-23/32" ←

Bulb T-12

Base Large-Wafer Octal 8-Pin with Sleeve and ←

External Barriers (JETEC No. 88-98)

Basing Designation for BOTTOM VIEW 8BD

Pin 1—Grid of

Unit No.2

Pin 2—Plate of

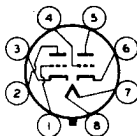
Unit No.2

Pin 3—Cathode of

Unit No.2

Pin 4—Grid of

Unit No.1



Pin 5—Plate of

Unit No.1

Pin 6—Cathode of

Unit No.1

Pin 7—Heater

Pin 8—Heater

DC AMPLIFIER

Values are for Each Unit

Maximum Ratings, Absolute Values:

PLATE VOLTAGE 250 max. volts

PLATE CURRENT 125 max. ma

PLATE DISSIPATION 13 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode 300 max. volts

Heater positive with respect to cathode 300 max. volts

← Indicates a change



6080

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BULB TEMPERATURE* 200 max. °C

Maximum Circuit Values:

Grid-Circuit Resistance:

For cathode-bias operation 1.0 max. megohm
 For fixed-bias operation[□] 0.1 max. megohm
 For combined fixed and
 cathode-bias operation[▲] 0.1 max. megohm

BOOSTER SCANNING SERVICE

Values are for Each Unit

Maximum Ratings, Absolute Values:

For operation in a 525-line, 30-frame system[▲]

PEAK NEGATIVE-PULSE PLATE VOLTAGE* 3000 max. volts
 PEAK NEGATIVE-PULSE GRID VOLTAGE 2300 max. volts
 DC PLATE CURRENT 125 max. ma
 PLATE DISSIPATION. 13 max. watts
 PEAK HEATER-CATHODE VOLTAGE:
 Heater negative with respect to cathode* 300 max. volts
 Heater positive with respect to cathode. 300 max. volts
 BULB TEMPERATURE* 200 max. °C

Maximum Circuit Values (For maximum rated conditions):

Grid-Circuit Resistance:

For cathode-bias operation 1.0 max. megohm
 For fixed-bias operation not recommended

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	2.26	2.74	amp
Amplification Factor				
(Each Unit)	1,2	1.4	2.6	
Plate Current (Each Unit). .	1,2	100	150	ma
Transconductance				
(Each Unit)	1,2	5800	8200	μmhos
Reverse Grid Current				
(Units in Parallel)	1,3	-	4	μamp

Note 1: With 6.3 volts ac or dc on heater.

Note 2: With plate-supply voltage of 135 volts, and cathode-bias resistor of 250 ohms in each cathode (both triode units operating).

Note 3: With plate-supply voltage of 135 volts, grid resistor of 1 megohm in each grid and cathode-bias resistor of 250 ohms in each cathode (both triode units operating).

● At hottest point on bulb surface.

□ When fixed bias is used, the plate circuit should contain a protective resistance to provide a minimum drop of 15 volts dc at the normal operating conditions.

▲, ▲, ●, ●: See next page.

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6080

6080

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- ★ When combined fixed- and cathode-bias is used, the cathode-bias portion should have a minimum value of 7.5 volts dc at the normal operating conditions.
- ▲ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
- The duration of the voltage pulse must not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
- Operation of this tube is not recommended with a damper pulse between heater and cathode.

SPECIAL RATINGS & PERFORMANCE DATA

Shock Rating:

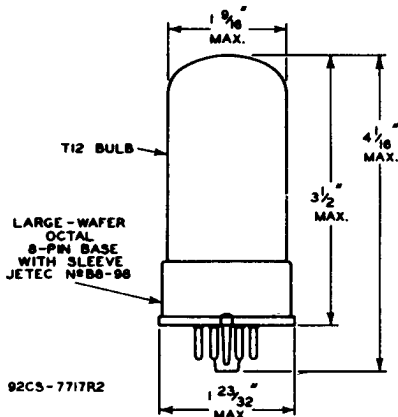
Impact Acceleration 450 max. g
 Tubes are held rigid in four different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 450 g impact acceleration.

Fatigue Rating:

Vibrational Acceleration 2.5 max. g
 Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 25 cycles per second for 32 hours.

Low-Frequency Vibration Performance:

RMS Output Voltage 200 max. mv
 Under the following conditions and with units connected in parallel: Heater voltage of 6.3 volts, plate voltage supply of 135 volts, dc grid voltage of -7 volts, plate load resistance of 2000 ohms, and vibrational acceleration of 2.5 g at 25 cycles per second.



← Indicates a change

AUG. 1, 1953

TUBE DEPARTMENT
 RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

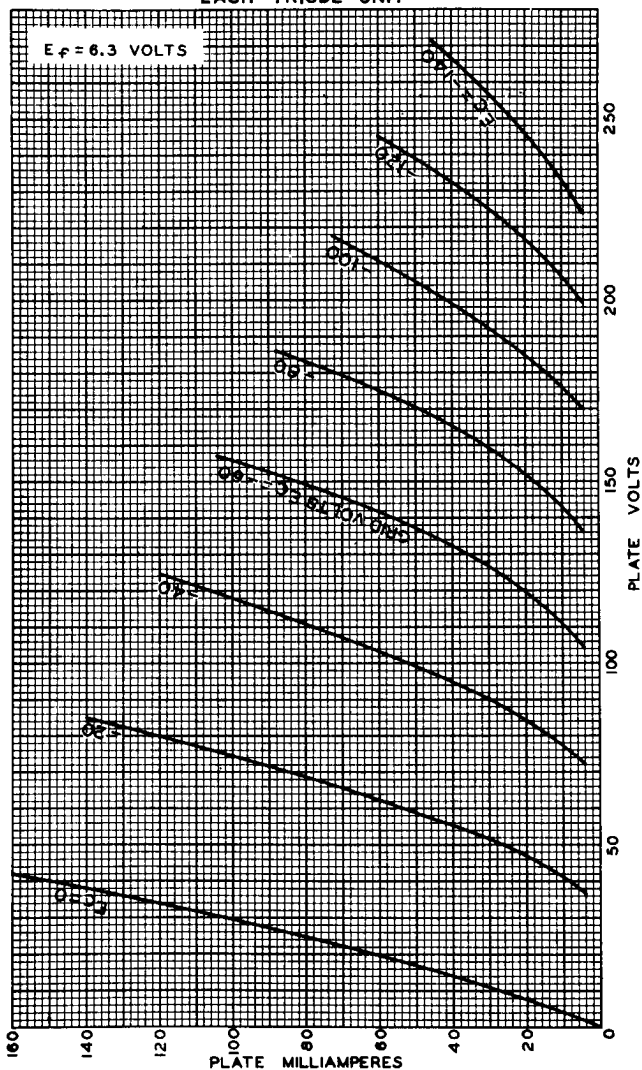
DATA 2

6080



6080

AVERAGE PLATE CHARACTERISTICS EACH TRIODE UNIT



OCT. 19, 1951

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7695